

REMARKS/ARGUMENT

I. Disposition of Claims

Claims 4-8, 11-15, 19-21, 23-30, 32-37, 39-40, 43-44, 47-50, 53, 55-58 are pending in the application. All pending claims stand rejected. Claim 59 is withdrawn from further consideration by the Examiner as being drawn to a non-elected invention.

II. Claim Amendments

Claims 39 and 40 have been canceled in this paper. The Applicants have amended all remaining independent claims (Claims 4, 56-58) with a negative limitation wherein the delivery means or wire feed subsystem does not deposit a feedstock material in the form of droplets. The Applicants have also amended all independent claims such that the wire feed subsystem or delivery means delivers a feedstock to a target location in a solid form. This amendment is supported in the Applicants' specification as filed (ref: page 21, lines 5-10). Other miscellaneous amendments have been made for clerical purposes.

III. Claim Rejection -- 35 USC §103(a): Claims 4-8, 11-15, 19-21, 23-30, 32-37, 39-40, 43-44, 47-50, 53, 55-58

Claims 4-8, 11-15, 19-21, 23-30, 32-37, 39-40, 43-44, 47-50, 53, 55-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mahoney *et al.* (USPN 4,762,975; hereafter referred to as **Mahoney**) in view of Sterett *et al.* (USPN 5,787,965; hereafter referred to as **Sterett**).

Applicants have amended independent Claims 4 and 56-58.

As the USPTO recognizes in MPEP §2142:

The legal concept of *prima facie* obviousness is a procedural tool of examination which applies broadly to all arts. It allocates who has the burden of going forward with production of evidence in each step of the examination process ... The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness ... The initial evaluation of *prima facie* obviousness thus relieves both the examiner and applicant from evaluating evidence beyond the prior art and the evidence in the specification as filed until the art has been shown to suggest the claimed invention. (emphasis added)

To reject claims of an application under 35 U.S.C. 103(a), an Examiner has the burden of establishing an un rebutted *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, a patent Examiner must show: (1) a suggestion or motivation to modify and/or combine the references, (2) a reasonable expectation of success, and (3) the prior art must teach or suggest all the limitations of the rejected claim. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991), *see also*, M.P.E.P. §§2142-3. *See In re Deuel*, 51 F.3d 1552, 1557, 34 U.S.P.Q.2d 1210, 1214 (Fed. Cir. 1995) (emphasis added). In the absence of a proper *prima facie* case of obviousness, an applicant who complies with the other statutory requirements is entitled to a patent. *See In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992).

The Applicants respectfully traverse the rejections as applied to Claims 4-8, 11-15, 19-21, 23-30, 32-37, 39-40, 43-44, 47-50, 53, 55-58 and respectfully argue that the Examiner has not established a *prima facie* case of obviousness for the following reasons:

All Claim Limitations Must Be Considered

The references do not teach or suggest all the claim limitations. When evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. MPEP §2143.03 states:

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.

Because from the facts derived from the references, as set forth below, the references do not teach or suggest all of the claim limitations, and thus, the rejection is unsupported by the art and should be withdrawn.

The Examiner states that **Mahoney** teaches, in general, “an automated wire feed mechanism (38)” (ref: 5/15/06 Office Action, page 3, line 16-17). However the Applicants do not just claim, in general, a wire feed mechanism or delivery means in their independent claims. The Applicants claim the following elements or an equivalent: a system capable of 1) delivering a wire feedstock in solid form at a target location in a sequential manner, 2) melting the wire feedstock at a target location, 3) [melting the wire feedstock at a target location] consistent with the sequential deposition of the wire feedstock, and 4) sustaining a molten pool at the target location in regards to the formation of a three-dimensional article. Further, the Applicants have

amended all independent claims with a negative limitation whereby the Applicants' deposition method is not a droplet deposition system as in **Mahoney** and **Sterett**.

Sterett does teach a solid freeform fabrication system, but as stated in the Applicants' Amendment in response to the November 30, 2005 Office Action (which is incorporated by reference herein) **Sterett**'s deposition system is designed around first melting a metal and then dropping the metal droplets to a target location. **Sterett** also discloses an elaborate system of subjecting each metal droplet to alternative positive and negative charges in an effort to prevent droplets from combining with each other and thus, maximize the production of uniform droplets. **Sterett** does not teach or suggest the capability to 1) deliver a wire feedstock in solid form at a target location in a sequential manner, 2) melt a wire feedstock at a target location relative to a position on a fabricated object, 3) melt a wire feedstock at a target location consistent with the sequential deposition of said wire feedstock, 4) sustain a molten pool at the target location, or any combination.

Similarly, **Mahoney** discloses a device that in one embodiment uses a plurality of wire spools to manufacture micron and submicron sized particles by first melting the wire and then dropping or spraying the resultant ultrafine particles to a collector port or a workpiece, respectively (ref: **Mahoney**, Col. 5, lines 10-32). **Mahoney** does not teach or suggest the capability to 1) deliver a wire feedstock in solid form at a target location, 2) melt a wire feedstock at a target location relative to a position on a fabricated object, 3) melt a wire feedstock at a target location consistent with a sequential deposition of said wire feedstock, 4) sustain a molten pool at the target location, or any combination. The Applicants recognize that both

Mahoney and **Sterett** can create metal droplets. And **Mahoney** can create metal droplets from a wire feedstock. But, the Applicants' are not claiming the use of metal droplets or a deposition system that employs metal droplets and the Applicants have incorporated a negative limitation to explicitly document said non-use of a droplet system. Thus, the combination of **Mahoney** and **Sterett** fails to consider all of the Applicants' claim limitations.

Therefore, the Applicants respectfully traverse the Examiner's rejections relative to the rejected claims, respectfully argue that a *prima facie* case of obviousness has not been established relative to the rejected claims, and respectfully request reconsideration of the rejections in light of the claim amendments.

IV. Claim Rejection -- 35 USC §103(a): Claims 51-52

Claims 51-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Mahoney** in view of **Sterett** and in further view of Langer (USPN 5,460,758; hereafter referred to as **Langer**).

The arguments made in Section III of this paper are herein incorporated by reference. The Applicants have respectfully argued that the Examiner has failed to establish a *prima facie* case of obviousness for combining **Mahoney** in view of **Sterett**. Thus, because the addition of **Langer** is dependent on the **Mahoney/Sterett** combination, the **Mahoney/Sterett/Langer** combination also fails to establish a *prima facie* case of obviousness.

Therefore, the Applicants traverse the Examiner's rejections of Claims 51-52 and respectfully argue that a *prima facie* case of obviousness has not been established.

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V. Conclusion

In summary, Applicants now therefore respectfully submit that the application presently stands in a condition for allowance.

The Commissioner is hereby authorized to charge any fee which may be required, or credit any overpayment, to Deposit Account No. 14-0116.

Respectfully submitted,

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